

Retrofit Strategy feedback

19 May 2021

Technical support pilot for the South West Energy Hub

- Social rented homes required to achieve EPC Band C by 2035
- Many landlords uncertain about most appropriate retrofit measures for short term targets, and also longer term decarbonisation
- BRE commissioned to develop retrofit strategies for 5 pilot landlords

Landlord	A	B	C	D	E
Type	RSL	RSL	RSL	Local Authority	RSL
Number of homes assessed	11,850	7,670	6,500	2,300	336
% not served by mains gas	20%	30%	15%	40%	80%
Homes EPC Bands D-G	7,159 (60%)	2,295 (30%)	2,372 (36%)	1,101 (48%)	58 (17%)
Homes EPC Bands E-G	1,492 (13%)	325 (4%)	173 (3%)	287 (12%)	7 (2%)

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- During the first part of the pilot, each landlord underwent a stock-level data assessment and options appraisal (carried out by a separate consultant) → most cost effective route to EPC C per home
 - Data formed basis of BRE prioritisation strategies
 - Funding availability and conditions
 - Alignment with planned Repair, Maintenance & Improvement (RMI) works
 - Data availability influenced:
 - Strategy confidence
 - Level of analysis detail possible

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- Data quality/ completeness influences confidence in strategy
 - **Baseline data accuracy**
 - Interpolation of unknown variables (no recent EPC)
 - Listed/ restricted development status prevent some measures
 - Measures certainty
 - Cost certainty
 - Verification of measures required by detailed home surveys
 - **Variable RMI data** – some detailed, some reactive
 - Offset RMI costs for aligned works support financial case for retrofit
 - Risk RMI works precede retrofit works, unfulfilled lifespans, cost

- *Switch to Air Source Heat Pump*
 - Old heating system due for replacement
 - Replacement cost can offset part of new ASHP cost
 - Need to source less additional funding, less occupant disruption
- *Installation of Photovoltaic system (PV)*
 - Roof covering renewal due for replacement imminently
 - Roof timed before/ at same time as PV, no need to remove and re-commission PV in short term (at extra cost)
- *Solid wall insulation*
 - Window replacements timed ahead of wall insulation to ensure robust detailing/ sealing, and high quality installation

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- Programme priorities for funding:
 - Lowest EPC bands (E-G, i.e. greatest risk of fuel poverty)
 - Works that can align with programmed RMI measures
 - Where funding covers several measures:
 - Insulation > heating system > renewable energy
 - Where ASHPs recommended, off gas prioritised over gas
 - Off gas generally higher running costs and CO₂ emissions
 - Fabric measures prioritised now to 2025
 - Systems/ services measures now to 2035

- Most landlords would benefit from:
 - Green Homes Grant Local Authority Delivery (GHG LAD) funding to subsidise the more costly measures for qualifying homes (Bands E-G)
 - Energy Company Obligation (ECO) funding for other insulation measures
 - Clean Heat Grant (CHG, 2022+), for ASHPs not sought under GHG LAD
- Landlords with smaller number of homes requiring ASHPs may consider Renewable Heat Incentive (RHI) short term
 - House-by-house application, may be overly burdensome

- Opportunity
 - Where possible to increase numbers of measures delivered in earlier years, likely to attract relatively more generous funding (already committed, future schemes less certainty)
- Barriers
 - Measures uncertainty (from data assumptions) – some homes may be ineligible for funding, or measures not viable
 - Schemes may stall or additional funding need to be sourced
 - Difficulty securing suppliers when high competition for such services → could cause delays or cost increases (or funding remain unspent)

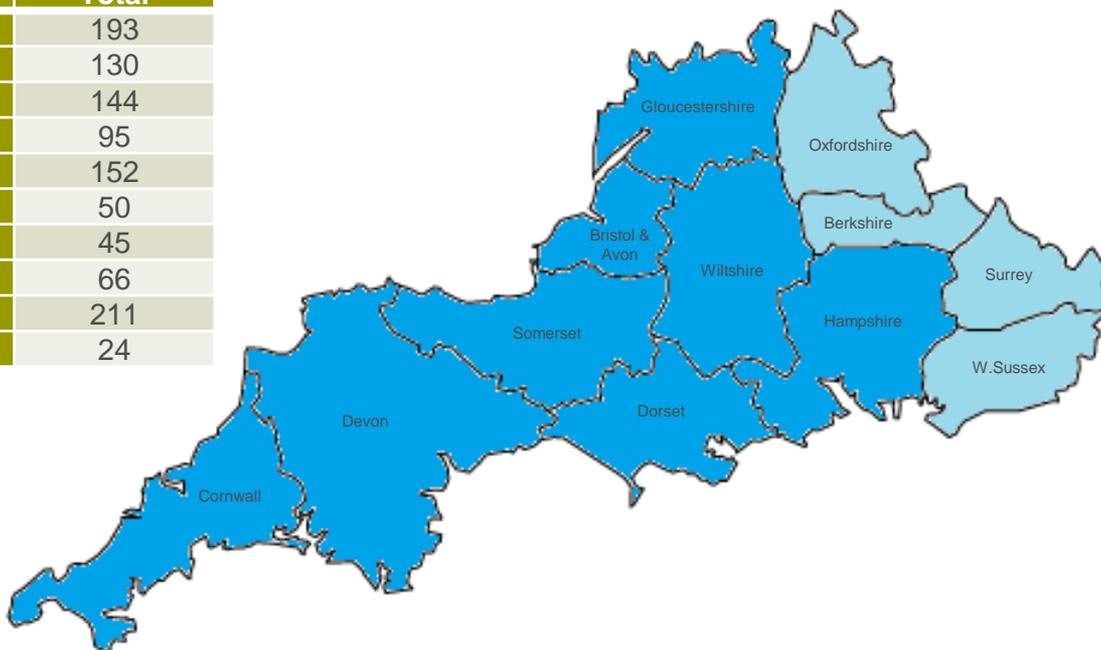
3 year measures vs funding summary

- High first year grant availability prioritises Band E-G homes
- Front-loaded distribution of measures to prioritise fabric

	Landlord	A	B	C	D	E
	Number of retrofit measures to 2035 to achieve Band C	9312	3373	3173	1303	137
Year 1	Number of measures	977	439	327	254	24
	Value of measures	£2,212,400	£950,100	£884,100	£645,500	£96,850
	Grant opportunity (%)	£1,642,500 (74%)	£486,500 (51%)	£564,300 (64%)	£342,100 (65%)	£71,900 (74%)
Year 2	Number of measures	792	413	302	215	20
	Value of measures	£1,768,950	£851,300	£747,800	£490,200	£45,800
	Grant opportunity (%)	£402,300 (23%)	£200,000 (24%)	£276,000 (37%)	£200,000 (41%)	£8,000 (18%)
Year 3	Number of measures	797	413	303	215	13
	Value of measures	£1,732,400	£850,600	£739,300	£490,200	£13,500
	Grant opportunity (%)	£376,000 (22%)	£200,000 (24%)	£272,000 (37%)	£200,000 (41%)	£0 (0%)

South West and neighbouring counties

	Total
Air Source Heat Pump installers	193
Ground/ Water Source Heat Pump installers	130
Solar Photovoltaics installers	144
Roof insulation installers	95
Glazing & door installers	152
Cavity Wall insulation installers	50
Internal wall insulation installers	45
External wall insulation installers	66
PAS 2035 Retrofit Assessors	211
PAS 2035 Retrofit Coordinators	24



Sources:

- TrustMark database
- MCS database

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- Households with electric heating more likely to have difficulty achieving a comfortable temperature than gas heated homes
 - Feedback of under-heating; savings from retrofit measures may be less than modelled estimates (will need to manage expectations)
 - Many households do not check energy prices or switch suppliers
 - New windows & doors evidently highly valued by occupants, even though typically offer modest EPC improvements
 - All potential retrofit measures viewed quite favourably
 - General preference for works all at once rather than spread out

- Key short term funding aligns with aim to reduce fuel poverty (i.e. eligible on EPC Bands E-G). But most stock D+, so alternative funding needed
- New ‘pay as you save’ business models of finance/ measures packages may be a useful alternative for D+ homes
- PAS 2035 funding condition is good to ensure quality, but lack of relevant professionals (Retrofit Assessors, Coordinators) could be a barrier to delivery

- Resourcing and time to apply for funding should not be underestimated. Risk landlords may not be able to collect data, derive appropriate strategies and prioritise homes in time for short term funding options
- Landlords do not necessarily have in-house experience to set up and implement such extensive retrofit programmes. But value of grant funding available to supplement existing RMI budgets for aligned measures could help offset costs for additional staff
- High competition for supply chain services may risk ability of landlords to deliver within grant timeframes once funding secured

Thank you

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